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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,692	08/04/2005	David Norman Leach	DAVI124.001APC	5279

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EXAMINER

KASSA, TIGABU

ART UNIT	PAPER NUMBER
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1619

NOTIFICATION DATE	DELIVERY MODE
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04/22/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/526,692	Applicant(s) LEACH ET AL.	
	Examiner TIGABU KASSA	Art Unit 1619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/26/09.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26,27,29-31,33-36,38-41,44-57 and 79 is/are pending in the application.
- 4a) Of the above claim(s) 33-36 and 38-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26,27,29-31,41,44-57 and 79 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/04/2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claims 26-27, 29-31, 33-36, 38-41, 44-57, and 79 are pending. Claims 26-27, 29-31, 41, 44-57, and 79 are under consideration in the instant office action. Claims 33-36 and 38-40 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claims. Claims 1-25, 28, 32, 37, 42-43, 58-78, and 80-82 are cancelled.

Election/Restrictions

Applicant's election of Group II (claims 26-27, 29-31, 33-36, 38-41, 44-57, and 79) in the reply filed on 01/26/09 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Applicant's election of the single structure which is disclosed in applicant's specification (page 11, lines 15-17) as species is also acknowledged.

Priority

The earliest effective filing date afforded for the instantly claimed invention, has been determined to be 09/03/02, the filing date of the provisional application 60/408,129.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 08/04/05 is noted and the submissions are in compliance with the provisions of 37 CFR 1.97. Accordingly, the examiner has considered the references.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness

Claims 26-27, 29-31, 41, 44-57, and 79 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maupin et al. (WO 02/50053, IDS reference) in view of Chetty et al. (Tetrahedron Letters 1969, 5, 307-309, IDS reference) and as evidenced by Gonzalez-Coloma et al. (Journal of Chemical Ecology 1995, 21 1255-1270).

Applicant Claims

Instant claims 26-27 and 29 recite a method of controlling pests using a compound of formula I, II, III, respectively. Instant claim 30 further specifies the functional groups of formula III and instant claim 31 specifies the compound eremophilone. Instant claims 44-46 specify the method of claim 26 wherein the amount of compound used is an effective amount. Instant claims 47-51 further specify the pests targeted in the method of claim 26. Instant claims 52-57 specify the mode of application of the compound used in the method of claim 26. Instant claim 79 recites a method of combating an already existing pest infection using the compound of formula I.

Determination of the Scope and Content of the Prior Art (MPEP §2141.01)

Maupin et al. disclose pesticidal sesquiterpenes which include eremophilone (formula III, page 20, lines 2-5). Pesticidal compositions disclosed include one or more of the disclosed eremophilane sesquiterpenes (page 33, lines 11-13). The compounds have deterrent, repellent and/or toxic effects on certain pest targets and may function as pest repellents or pest control agents, as well as pesticides (page 36, lines 29-31). The efficacy and quantity of a pesticidally effective amount for a given compounds maybe determined by routine screening procedures (page 37, lines 12-15). Additionally, the appropriateness of a compound of composition may be assessed by observing any adverse effects to the person applying the composition to an infested

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plant, animal, or environmental locus (page 37, lines 26-29). Maupin et al. also disclose methods of using the disclosed eremophilane sesquiterpenes as pesticides (page 39, line 7). The compound or composition is administered in a pesticidally effective amount (page 39, lines 27-28). The amount, frequency and number of applications may depend on a variety of factors including, among other things the feeding habits of the pest (page 40, lines 11-16). Methods of application include spraying, atomizing, dusting, immersing, coating, dressing, scattering, and pouring (page 41, lines 8-9). The formulations may be used to kill or repel pests (page 42, line 1). The examiner notes that effective antifeedant amounts of the compound would result in either starving the pest (i.e. killing) or repelling the pest as it is forced to find food elsewhere. The antifeedant activity of sesquiterpenes is also evidenced by Gonzalez-Coloma et al. in "Antifeedant and toxic effects of sesquiterpenes from *Senecio plamensis* to Colorado potato beetle" (Journal of Chemical Ecology 1995, 21 1255-1270.; abstract). The formulation may kill or repel a pest by directly contacting the pest, may be induced into the atmosphere of the locus, or may be applied to a plant or inanimate object (page 42, lines 9-12). Certain embodiments encompass protection of homes, buildings or other structures from nuisance insects, such as termites (page 42, lines 13-14). The compound or composition may be applied to a locus within or outside including spraying onto floors or cupboards or soaking the ground outside the structure (page 42, lines 19-22). Additionally, the compound or composition may be embedded within materials used to construct the structure, such as siding, wall studs, or beams (page 42, lines 22-24). Compounds or compositions disclosed may also be applied to the soil (page 43, line 25). These application methods would include applying the composition around the site or mixing with a layer of soil at the site. They would also include application to sites prior to and after infestation.

***Ascertainment of the Difference Between Scope the Prior Art and the Claims
(MPEP §2141.012)***

Maupin et al. teach that other compounds instead of or in addition to the instantly selected species may also be used in pest control. The examiner notes, however, that the instantly selected species was taught by Chetty et al. in “7a(H)-Eremophila-1,11-dien-9-one. A New sesquiterpene for the Eremophilane Type.” (Tetrahedron Letters 1969, 5, 307-309).

***Finding of Prima Facie Obviousness Rationale and Motivation
(MPEP §2142-2143)***

It would be obvious to the skilled artisan to use eremophilone in a method to control pests because Maupin et al. teaches its use to control pests. The skilled artisan would have been motivated to use eremophilone specifically, because it is taught by Chetty et al. Specifically, Chetty et al. teach that the compound was found in a small tree known as Eremophila mitchelli. Plants are commonly known to produce compounds which are effective against infestations, diseases, and other threats the plant faces. Therefore, it is not surprising that eremophilone would be effective at controlling pests, particularly pests known to infest wood, e.g. termites. The skilled artisan would have a reasonable chance of expectation of success because Maupin et al. teach every limitation of the instantly claimed invention.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225

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USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claim 26-27 and 29-31 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 13-16, 19-20,32-33, and 37-38 of U.S. Patent No. 7129271 in view of Chetty et al. (Tetrahedron Letters 1969, 5, 307-309, IDS reference).

Although the conflicting claims are not identical, they are not patentably distinct from each other because applicant's claim in instant claims 26-27 and 29 recite a method of controlling pests using a compound of formula I, II, III, respectively. Instant claim 30 further specifies the functional groups of formula III and instant claim 31 specifies the compound eremophilone.

U.S. Patent No. 7129271 teaches a method of controlling pests using a pesticidally effective amount of eremophilane sesquiterpene of the indicated structure which includes the instantly selected species, eremophilone (see claims 13-16, 19-20, 32-33, and 37-38). This teaching differs from the instantly claimed invention in that U.S. Patent No. 7129271 also teaches other possible structures in addition to the instantly elected species.

It would be obvious to the skilled artisan to use eremophilone in a method to control pests because U.S. Patent No. 7129271 teaches its use to control pests. The skilled artisan would have

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been motivated to use eremophilone specifically, because it is taught by Chetty et al.

Specifically, Chetty et al. teach that the compound was found in a small tree known as *Eremophila mitchelli*. Plants are commonly known to produce compounds which are effective against infestations, diseases, and other threats the plant faces. Therefore, it is not surprising that eremophilone would be effective at controlling pests, particularly pests known to infest wood, e.g. termites. The skilled artisan would have a reasonable chance of expectation of success because U.S. Patent No. 7129271 teaches in a very similar manner the limitations of the instantly claimed invention.

Conclusion

Claims 26-27, 29-31, 41, 44-57, and 79 are rejected, while claims 33-36 and 38-40 are withdrawn. Claims 1-25, 28, 32, 37, 42-43, 58-78, and 80-82 are cancelled. No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIGABU KASSA whose telephone number is (571)270-5867. The examiner can normally be reached on 9 am-5 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tigabu Kassa

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/PORFIRIO NAZARIO GONZALEZ/
Primary Examiner, Art Unit 1621